

## WHAT IS CLAIMED IS:

1 1 In a process for preparing door skins and other door  
 2 components by the molding of sheet molding compound containing an unsaturated,  
 3 curable molding resin in a heated mold under pressure, the improvement comprising:

4 SUB selecting, as a cure catalyst composition,  
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5 a) an effective amount of a catalyst component containing a major  
 6 amount, based on the amount of catalyst, of t-amylperoxybenzoate, and

b) an effective amount of a polymerization inhibitor composition.

1 2. The process of claim 1, wherein said catalyst component is  
 2 present in an amount of 0.5 to 5 parts per 100 parts of said molding resin, and said  
 3 inhibitor composition is present in an amount of 0.01 part to about 1 part per 100  
 4 parts molding resin, calculated on the basis of a 5 weight percent concentration of  
 5 inhibitor in said polymerization inhibitor composition.

1 3. The process of claim 2 wherein said inhibitor is p-  
 2 benzoquinone.

1 SUB  
C17 4. The process of claim 1, wherein said catalyst component is  
 2 present in an amount of 0.8 to 2.0 parts per 100 parts of said molding resin, and said  
 3 inhibitor is present in an amount of 0.05 part to about 0.4 parts per 100 parts  
 4 molding resin.

1 5. The process of claim 1 wherein the cure time is less than 60  
 2 seconds.

1 6. The process of claim 1 wherein the cure time is less than 50  
 2 seconds.

1 7. The process of claim 1 wherein a vacuum is applied upon  
 2 closure of the tool in which said sheet molding compound is molded.

1 8. The process of claim 7 wherein said vacuum is between 15 and  
2 29 inches mercury and is released from 5 to 30 seconds after its application.

1 9. A door having a compression molded SMC door skin and  
2 applied inserts or add-on panels, the improvement comprising securing said applied  
3 inserts or panels to a surface of said door skin using adhesive tape as the sole  
4 securing means.

1 10. The process of claim 9 wherein said add-on panels are applied  
2 to said doorskin without first making a hole through said doorskin.

1 11. A process for reducing surface defects on a stainable  
2 compression molded SMC doorskin without creating a non-uniformly stainable  
3 surface, said process comprising:

- 4 a) selecting as an SMC, an SMC which exhibit a  
5 cure time of one minute or less;
- 6 b) upon closure of a door skin mold containing said SMC,  
7 applying a vacuum of from about 10 inches Hg to 29  
8 inches Hg; and
- 9 c) maintaining said vacuum for a period of from about 5  
10 seconds to about 30 seconds.

1 12. The process of claim 11 wherein said cure time is 50 seconds  
2 or less.

1 13. The process of claim 11, wherein said vacuum is from about  
2 15 to 29 inches Hg, and the pressure of the mold is from about 200 psig to about  
3 1500 psig.

1 14. The process of claim 11, wherein the vacuum is applied for  
2 from 10 to 23 seconds.

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1 15. A compression molded SMC doorskin, or molded part,  
 2 comprised of the cured reaction product of an SMC containing a cure catalyst  
 3 composition containing a catalyst system effective to cure said doorskin in less than  
 4 one minute at 150°C.

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1 16. The doorskin or molded part of claim 15 wherein said SMC  
 2 contains an inhibitor in an amount of 0.01 part to about 2.0 part per 100 parts of a  
 3 curable unsaturated resin component in said SMC, and a catalyst component  
 4 comprising in major part t-amylperoxybenzoate.

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1 17. In a fiberglass-reinforced door skin produced by compression  
 2 molding sheet molding compound containing from about 5 parts to about 300 parts  
 3 fiberglass per 100 parts of curable resin, the improvement comprising replacing up  
 4 to about 25 weight percent of fiberglass with wollastonite.

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